

# Emerson`s Micro Motion™ High Pressure Coriolis Flow Meter Helps TotalEnergies Refueling Station to Fuel Vehicles with Hydrogen

## RESULTS

- NMI-certified metering for hydrogen dispensing offers transparency and certainty to vehicle fueling
- Hydrogen dispensers include Micro Motion HPC015 Coriolis flow meters designed for high operating pressures
- Dispensing hydrogen under 700 and 350 Bar pressure for private and transportation vehicles



## APPLICATION

Hydrogen custody transfer with dispensing units

## CUSTOMER

TotalEnergies Gas Mobility, the Netherlands

## CHALLENGE

As hydrogen powered vehicles fuel up, customers want to be sure they are receiving the exact quantity of fuel they have paid for. Safety is a necessary concern as hydrogen dispensing is performed under extreme pressures up to 700 Bar. Hydrogen dispensing units must be certified to cover both fueling accuracy and safety requirements as any other fuel units. In the case of TotalEnergies, its H2 dispensers were about to be certified for the accurate measurement.

## SOLUTION

TotalEnergies Gas Mobility has decided to install Emerson`s Micro Motion™ High Pressure Coriolis flow meters on dispensers that can fill vehicles with hydrogen at 350 and 700 Bar operating pressure conditions for transportation and private vehicles respectively. Micro Motion HPC015 Coriolis flow meters designed specifically to handle maximum operating pressure up to 1060 bars. It helps to ensure transfer of high pressure fuels like hydrogen.

"The flow meter in the dispenser measures the hydrogen mass that has gone through. This is certified by national and OIML-139 standards that state that every amount that has gone through the certified meter, has actually gone through it. Together with the payment system and calculator that are also certified and tested it assures the measured quantity and billed amount are within the set limits", – said Arthur van `t Wel, Technical Support Engineer of TotalEnergies Gas Mobility.

The 350 and 700 bar hydrogen (H2) dispensers which are in use at the hydrogen refueling station of TotalEnergies located in Arnhem were the first to be calibrated and certified by the Netherlands Measurement Institute (NMI) using the reference test installation of the VSL. Thus, vehicles that fill up at this TotalEnergies station under the PitPoint brand receive full transparency and certainty about the amount of hydrogen.

"The mass flow meters installed at the dispensers of our hydrogen fuel station ensure transparency and certainty of hydrogen quantity delivered to the new generation of vehicles using this zero tailpipe emission fuel", -  
Arthur van `t Wel, Technical Support Engineer ,  
TotalEnergies Gas Mobility



Dispenser with installed Emerson`s Micro Motion HPC015 Coriolis flow meter that fills vehicles with hydrogen under high pressure

**MICRO MOTION™**

AN-002557

For more information:

[www.Emerson.com/MicroMotionHPC](http://www.Emerson.com/MicroMotionHPC)

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**EMERSON™**

Emerson's Micro Motion High Pressure Coriolis flow meter is easily integrated with a small meter body and large range of transmitters making it suitable for high measurement accuracy for hydrogen gas flow. A safe meter design includes built-in rupture disk for ultra high pressure environment up to 1060 bars in accordance with ASME B31.3 Process piping code.

Smart Meter Verification diagnostics helps to check meter integrity in-situ, and supplied QR-code at the device allows customers to have an instant access to the documentation and information about installed meter.

### RESOURCES

#### **Micro Motion HPC015P Coriolis Flow Meter**

<https://www.emerson.com/MicroMotionHPC>



*Emerson's Micro Motion HPC015 Coriolis flow meter ideal for handling high pressure applications up to 1060 bar*

#### **European Regional Office**

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